

SAMPLE LESSON PLAN #2 (GRADES 4-6)

MODEL COMMUNITY RELAY

METHOD:

Students will be assigned to "Community" teams to compete with each other outdoors for a "Model Community" award for their planning and recycling efforts.

MATERIALS:

- One pile of 10 to 15 pieces of clean unsorted garbage for each team
- One container for recyclables
- One container for reusables
- One large container to serve as a landfill
- Model Community Award certificates

TIME:

Preparation: 30 minutes
Activity: 60 minutes to implement

Closing the Loop, a program of the California Integrated Waste Management Board, offers classroom activities and lessons for grades K-6 that help students discover and nurture an environmental ethic and stewardship for natural resources.

For more information about this lesson and Closing the Loop, please contact:

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BACKGROUND

In 1997, California diverted approximately 32% of its garbage from the landfill through waste prevention, recycling and composting. Two percent was converted from waste to energy through incineration, while 66% was sent to the landfill. When solid waste is diverted from the landfills through recycling and reusing efforts, natural resources are conserved, energy consumption is reduced and valuable space in landfills is saved.

LESSON

For this lesson, the teacher should be ready to explain to students which items can be recycled and reused.

PRE-ACTIVITY QUESTIONS

With the pile of unsorted garbage in front of the students lead a discussion:

1. Can you name three items that can be recycled?
2. Can you name two reusable items you have at home?
3. When we put waste into a garbage can, where is it taken for disposal?

For young children you may want to sort the garbage several times as a class activity, then several more times in cooperative learning groups, before the actual relay.

PROCEDURE

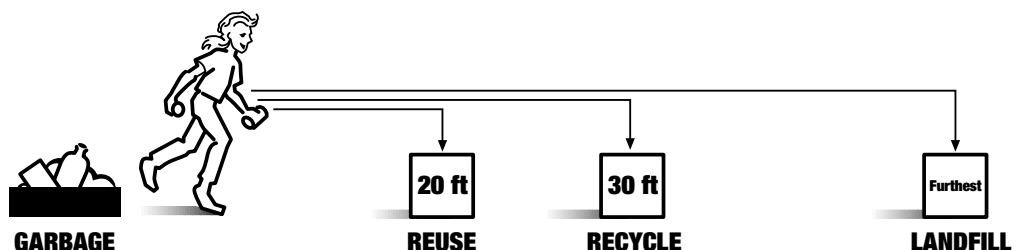
- A. Form teams of four or five students each. Explain that each team represents a community group competing for the coveted Model Community Award Certificate. This award will be presented to the first team able to deal effectively with its waste.

Encourage students to assist each other in placing materials in the correct receptacles.

- B. Set up the reuse receptacle approximately 20 feet from the starting line; the recycling receptacle 30 feet from the starting line; and the large receptacle representing the landfill as far away on the playground as is reasonably possible. This arrangement reflects the amount of energy/money required for each waste management option.
- C. Before beginning the contest, review different ways we can deal with waste.

Ask students: How does garbage get to a landfill (city garbage collection, self-haulers, etc.)? What costs are involved in getting garbage to a landfill (fuel, labor, vehicle maintenance, etc.)? What reasons would communities have for locating their landfill as far away as possible (less population, traffic, etc.)? Why is reuse closer than recycle?

- D. Make sure each team has a waste pile containing an equal number of recyclable or reusable items among the nonrecyclable and nonreusable items.



- E. Explain the rules of the game: This is a relay race in which only one person at a time from each team can put something in one of the containers and only one item at a time can be deposited. Each group should plan on how it will handle its waste in the least time, and in the most energy efficient way.

Give each group several minutes to plan its waste disposal strategy, then start the game.

Note: Use a planning sheet for the students to lay out their strategy.

- F. Monitor students' disposal choices to confirm students' claims about whether materials are recyclable. (Students may also monitor.) If students place an item into the wrong receptacle, have them take it back to the starting line, then place it into the correct receptacle. An alternative would be to not correct students until afterwards to provide an opportunity for explanation. "While some people occasionally reuse this Styrofoam cup, where does it normally end up?"

ALTERNATIVES

- Add a compost receptacle between the reuse and recycle container.
- At the end of the relay compare what was originally placed in the trash with what was sorted into the various receptacles.
- Award a certificate to each student after showing he or she effectively managed their waste by putting it into the appropriate receptacle.

DISCUSSION/QUESTIONS

When the last team finishes dealing with its waste, gather everyone together, bring the reuse, recycle, and landfill receptacles in front of the class and have a follow-up discussion.

- Ask the students what methods of waste disposal the winning team used (e.g., team members recycled and

reused materials to the greatest extent possible; team members continually sorted rather than waiting to sort before each run; team members invested more energy in waste disposal by running faster, etc.)? Review the items in the different destinations. Are the items in the reuse bin really items commonly recycled? How often are these items really reused?

Generate and rank/order a list of ways time and energy were used in dealing with the waste: sorting, running to the recycling receptacles, running to the landfill, etc. Make a bulletin board display for your classroom or a public place in the school.

- In what other ways is energy stored in waste? *It is used in the extraction of raw materials and in the manufacturing and transportation of products and packaging that become waste.*
- What do our community and county do with our waste? What have we learned from this game that might help our community and county better manage our waste?
- Present a Model Community Award Certificate to the winning team.



STANDARDS

Correlations to California's Content Standards, Grades K-12

ENGLISH — LANGUAGE ARTS

GRADE 4

Reading: Students understand the basic features of reading. They select letter patterns and know how to translate them into spoken language by using phonics, syllabication and word parts. 1.1

Listening and Speaking: Students listen critically and respond appropriately to oral communication. 1.8

GRADE 5

Reading: Students use their knowledge of word origins and word relationships to determine the meaning of specialized grade-level vocabulary. 1.1, 2.1,2.3

Listening and Speaking: Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication. 1.5

GRADE 6

Reading: Students use their knowledge of word origins and word relationships to determine the meaning of specialized grade-level vocabulary. 1.1

SCIENCE

GRADE 5

Investigation and Experimentation: Scientific progress is made by asking meaningful questions and conducting careful investigations. 6a, 6c

FURTHER STUDY

- For information about local waste prevention and recycling programs, call your city and/or county recycling coordinator.
- Visit a nearby recycling center in your community.
- Invite a community recycling coordinator to speak.